

Appl. No. 10/037,048

Attorney Docket No. 10541-887

I. Listing of Claims

1. (Cancelled)

2. (Currently Amended): A method for manufacturing a transverse leaf spring, said method comprising the steps of:

providing [[a]] an inflatable forming means and a mold adapted to receive said forming means, said forming means having a tapered width over at least a portion of its length and pivot portions of increased height;

partially inflating said forming means;

installing and stretching a pre-braided tubular fiberglass structure over said partially inflated forming means, said pre-braided structure comprising a plurality of elongated fibers arranged to form an elongated, elastic tubular structure;

placing said forming means and said pre-braided structure into a mold cavity defined by interior walls of said mold;

injecting a resin material into said mold to cover said fibers before fully inflating said forming means;

~~after injection of said resin material, using fully inflating~~ said forming means to apply pressure to said mold cavity to press said fiberglass structure and said resin material against said interior walls of said mold cavity; and

curing said resin material to create an integrated leaf spring component.

3. (Original): The method of claim 2 wherein said forming means further comprises an elastomeric bladder adapted to fit closely within said mold cavity.

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4. (Original): The method of claim 3 wherein said step of applying pressure further comprises inflating said bladder when in said mold cavity.

5. (Previously presented): The method of claim 2 further comprising the step of removing said component from said mold cavity, and wherein the step of curing said component is achieved outside of said cavity.

6. (Previously presented): The method of claim 2 wherein said tubular fiberglass structure is radially and longitudinally elastic.

7. (Currently Amended): A system for manufacturing a transverse leaf spring, said system comprising:

an inflatable forming means having a shape corresponding to said leaf spring, said shape defining a beam tapering in width over a portion of its length and pivot portions of increased height;

means for placing and stretching a pre-braided tubular fiberglass structure over said forming means, said pre-braided structure comprising a plurality of elongated fibers arranged to form an elongated, elastic tubular structure, such that the forming means extends axially within an interior portion of the tubular structure;

a mold cavity adapted to receive said forming means and said pre-braided structure;

means for injecting a resin material into said mold cavity; and

a means for inflating said forming means, whereby said tubular structure and said resin material are pressed together against the mold cavity.

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8. (Original): The system of claim 7 wherein said forming means further comprises an elastomeric bladder adapted to fit closely within said mold cavity.

9. (Cancelled).

10. (Original): The system of claim 7 wherein said tubular fiberglass structure further comprises a plurality of fiberglass fibers extending helically in an interwoven fashion in a tubular shape.

11. (Cancelled)

12. (Previously presented): The method of claim 2 wherein said plurality of elongated fibers are formed from groups of generally aligned, multiple strands of fibers, each of said groups being interwoven into said pre-braided fiber structure.

13. (Original): The method of claim 12 wherein a plurality of said groups extend helically around said structure to form said tubular shape.

14-15. (Cancelled)